

Technical Specifications for Infrastructure Project Signs

October 1, 2012



Table of Contents

Introduction	3
Applicability	3
Exemptions	3
Sign Design Specifications	4
Materials	6
Timing of installation and duration of placement	7
Technical specifications for permanent project signs by infrastructure type	8
Endnotes	19

Introduction

This document provides the technical specifications for project signs for infrastructure works funded by the Millennium Challenge Corporation (“MCC”). The primary purpose of the project signs specified in this document is to ensure that the people of the United States receive credit for their generous provision of foreign assistance through five-year grant agreements (“compacts”). The secondary purpose is to ensure that MCC and its partner Millennium Challenge Account authorities (“MCA”) are recognized for their role in project supervision and management.

The specifications are intended to complement MCC’s Standards for Global Marking¹, available at www.mcc.gov. The Standards for Global Marking require that a permanent plaque or marker be placed at each major work site for compact projects. This document provides guidance for infrastructure project signs that will be in place during works construction, and through the end of the compact period.

In addition to the signs specified in this document, contractors and MCAs may erect additional signs on work sites providing detailed project and contract information, as required by local law or custom. Such signs will be additional to, not in lieu of, the signs specified in this document.

1. Applicability

These technical specifications shall apply to all works projects, including roads, bridges sea ports, airports, railroads, water and sanitation structures, dams, irrigation schemes, power, and vertical structures. The specifications shall be included in bills of quantity that contractors deliver.

These specifications shall apply to all MCC compact infrastructure works contracted after October 1, 2012. For infrastructure works contracted prior to October 15, 2012, MCAs will have until January 15, 2013 to conduct an assessment to determine whether existing branding efforts on contracted infrastructure works are sufficient, as well as the feasibility of applying these specifications. MCA determinations on the applicability of these specifications to existing works contracts shall be provided to the relevant regional Deputy Vice President for approval.

2. Exemptions

Because of variation in costs, availability of materials, risk of theft, site conditions, and other factors across countries, exemptions to the size, material and other sign specifications proscribed within this document

may be appropriate. MCA requests for exemptions from these specifications should be submitted to an MCC regional Deputy Vice President for approval. Requests for an exemption from these specifications should include a description of what alternative specifications the MCA proposes, along with a justification for the exemption. Exemption requests should not include requests for changes to the design, content, or color of the signs, unless there are sources of funding besides MCC involved in the project (see section 3.1 below for additional information).

3. Sign Design Specifications

All construction signs for infrastructure works shall be uniform with respect to overall design, content, color, and size.

3.1. Design and Content

All signs shall contain the following statement, written in the official language of the country: A simplified project name, followed by the phrase “Funded by the American People”. Below that statement there shall be the official symbols of MCC and the MCA. The MCC and MCA symbols shall be of uniform size and parallel to each other. Where appropriate, the symbol of the partner country implementing entity may appear in parallel to the MCA and MCC symbols.

The font shall be Gotham Narrow Bold. All letters should be highly legible (e.g., have adequately sized letters and symbols to permit quick comprehension by a road user approaching the sign).

In the event that the project has been funded by MCC and a third party (e.g. the partner government, another donor, a private firm, etc.), a suitable design recognizing the contribution of all relevant parties shall be used. The specific text and design of the sign will be evaluated on a case by case basis with the consent of the MCA Chief Executive Officer and the MCC Resident Country Director.

3.2. Color

The background of the sign shall be retroreflective white, and all text will be written in black. The colors of the MCC logo shall conform with MCC’s Standards for Branding and Marking. The colors of the MCA logo shall conform with the specifications given in Figures 1 and 2 (see below). The sign will have a black border.

3.3. Size

All works signs shall measure 304 cm. (width) by 213 cm. (height) and each component of the sign shall conform to the measurement specifications given in Figure 1. Signs incorporating the logo of an implementing entity or government seal shall measure 304 cm. (width) by 166 cm. (height). The specific dimensions of each sign component are given in Figure 2. For signs smaller or larger than the standard sign measurements given in Figures 1 and 2, all sign elements (e.g., logos, type) shall be adjusted proportionally.

Sign specifications with dimensions, text and placement/ordering for each element are given below in Figures 1 and 2.

Figure 1: Specifications for signs containing two logos

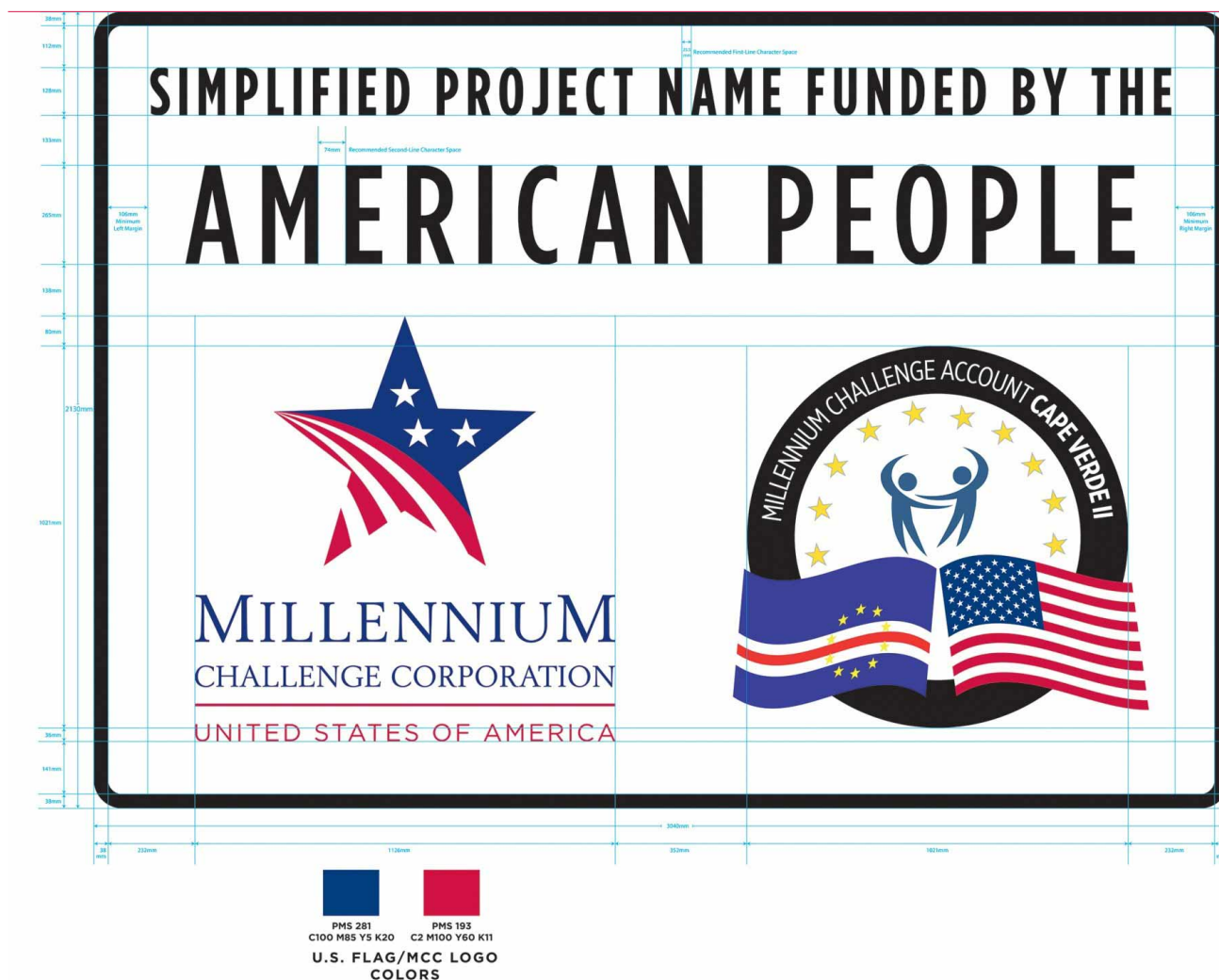
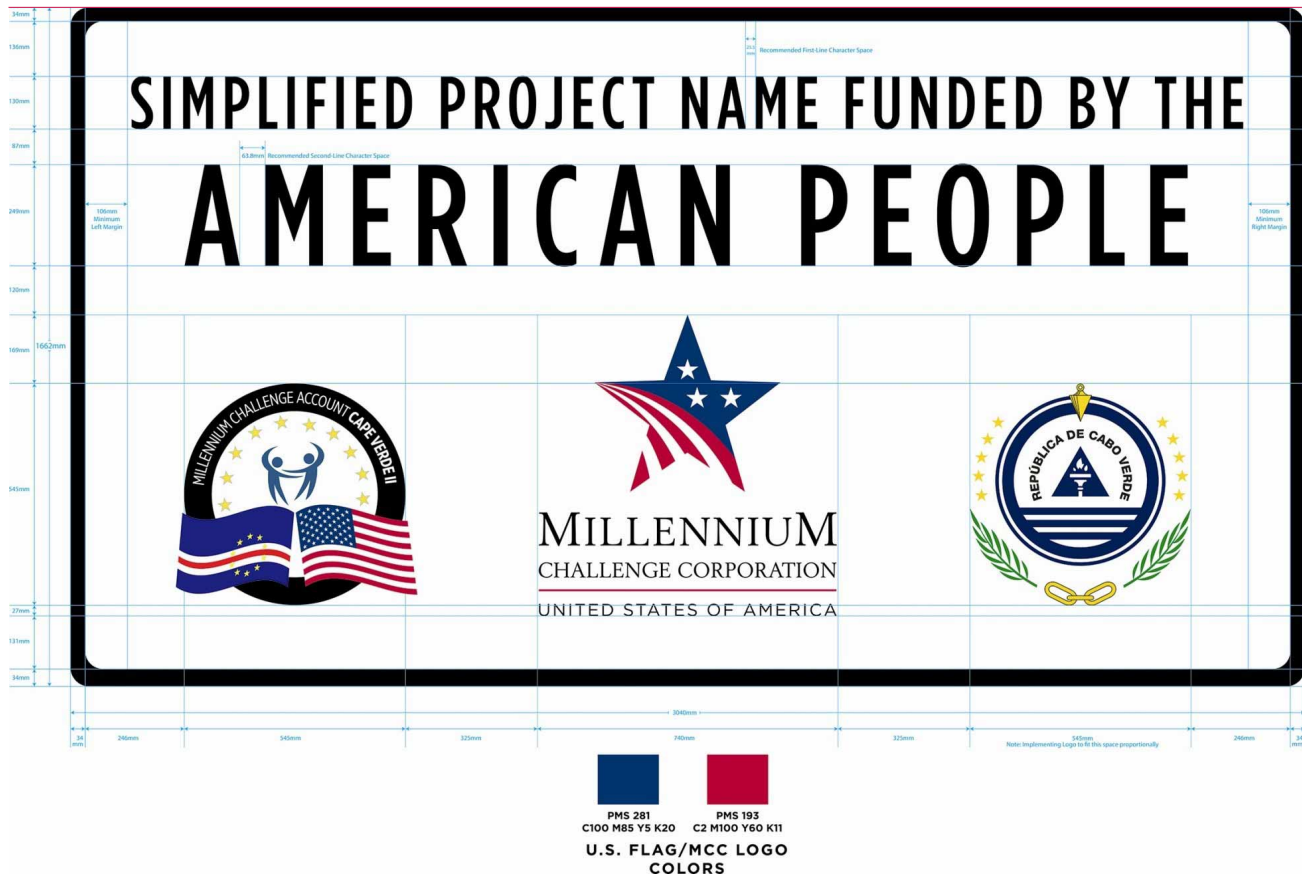


Figure 2: Specifications for signs containing three logos



4. Materials

4.1. Sign materials

Project signs shall be fabricated of 0.081inch minimum extruded aluminum panels. The maximum allowable deviation from flatness shall not exceed 0.010 inch per inch width of the panel.

4.2. Reflective sheeting

Project signs should be highly visible both by day and night. In order to achieve this, sign surfaces must be

covered with engineer-grade retroreflective material that has a smooth, sealed outer surface over a microstructure that reflects light. Retroreflective sheeting shall be in accordance ASTM D 4956. Color and luminance values for all types of reflective sheeting shall be in accordance with ASTM D 4956. Retroreflective sheeting shall have sufficient adhesion, strength and flexibility such that the sheeting can be handled, processed and applied according to the manufacturer's recommendations without appreciable stretching, tearing, cracking or other damage. Adhesive performance for retroreflective sheeting shall be in accordance with ASTM D 4956. The sheeting surface shall be in condition to be readily screen processed and compatible with transparent overlay films, plus recommended transparent and opaque screen process colors. The retroreflective sheeting manufacturer shall furnish information as to the type of solvent or solvents that may be used to clean the surface of the sheeting without detrimental loss of performance and durability. Signs should have a flat surface free of air bubbles, wrinkles or other blemishes.

4.3. Sign posts

Sign posts, foundations, and mountings shall be so constructed as to hold signs in a proper and permanent position, and to resist swaying in the wind or displacement by vandalism. All free standing signs will be supported by two posts made of galvanized metal of appropriate size meeting the latest edition of American Association of State Highway and Transportation Officials (AASHTO) Specifications for Structural Supports for Highway Signs or international equivalent. The sign post shall be framed together to make the sign durable. The sign post shall be embedded in a 75 cm diameter drilled shaft of 305 cm depth and placed in concrete.

4.4. Maintenance

Signs should be inspected by the site owner (i.e. contractor during the contract performance period) on a quarterly basis to ensure that they are structurally sound and not in need of repair. To assure adequate maintenance, a schedule for inspecting, and cleaning signs should be established. Weeds, trees, shrubbery, and construction, maintenance, and utility materials and equipment should not obscure the face of any sign. The signs should be maintained throughout the contract performance period. Damaged or stolen signs should be replaced as soon as possible.

5. Timing of installation and duration of placement

All project signs shall be in place within the first six months of contract award, and remain in place indefinitely (e.g. until local authorities decide to remove them after compact closure).

6. Technical specifications for permanent project signs by infrastructure type

6.1. Roads

This section provides specifications for signs for roads, including primary, secondary and rural roads.

6.1.1. Placement

There shall be one sign placed at the beginning and end of the road lot, as well as approximately every 20 kilometers, on both sides of the roadway. The division of roadway projects into lots shall not affect the distance between signs. Wherever feasible, signs should be placed close to population centers and major roadway intersections to ensure maximum visibility. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

6.1.2. Distance from road to sign

Signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

6.1.3. Sign height

For all roads, the minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to the elevation of the near edge of the road pavement, shall be 2.5 meters.

6.1.4. Sign size

For roads, signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.2. Bridges

6.2.1. Placement

There shall be one sign placed at each side of the bridge at each vehicular approach. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

6.2.2. Distance from road to sign

Signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.2.3. Sign height

For all roads, the minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to the elevation of the near edge of the road pavement, shall be 2.5 meters.

6.2.4. Sign size

For roads, signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.3. Sea ports

This section provides specifications for signs at sea ports and/or at the main roadway approaching the port.

6.3.1. Placement

There shall be one sign placed at the entrance to the sea port, and at each major construction site within the port. The sign at the port entrance should be aligned with the road user's line of vision and placed on either side of the roadway.

6.3.2. Distance from road to sign

For signs along roadways, signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.3.3. Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to ground elevation, shall be 2.5 meters.

6.3.4. Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.4. Airports

6.4.1. Placement

There shall be one sign placed at the entrance to the airport, and at each major construction site within the airport. The sign at the port entrance should be aligned with the road user's line of vision and placed on either side of the roadway.

6.4.2. Distance from road to sign

Signs along roadways shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.4.3. Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to ground elevation, shall be 2.5 meters.

6.4.4. Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.5. Railroads

6.5.1. Placement

There shall be one sign placed at the intersection of the rail works and major population centers or primary or secondary roads. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

6.5.2. Distance from road to sign

Signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.5.3. Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to the elevation of the near edge of the road pavement, shall be 2.5 meters.

6.5.4. Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.6. Water and Sanitation

6.6.1. Placement

There shall be one sign placed at major project sites, such as water treatment facilities or reservoirs, preferably at the entrance to these sites from adjacent roads. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

For the installation of community water points, there shall be a sign at each community water point. For the installation of water and/or sanitation lines, there shall be a sign every 5 kilometers along any adjacent roadways, preferably close to major population and/or market centers.

6.6.2. Distance from road to sign

For signs along roadways, signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.6.3. Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to ground elevation, shall be 2.5 meters.

6.6.4. Sign size

For major works sites signs shall measure 304 cm (width) by 166 cm (height). For community water points as well as water and/or sanitation lines, signs shall measure 152 cm (width) x 83 cm (height). Specifications for each component of the sign are given in Figure 1.

6.7. Dams

6.7.1. Placement

There shall be one sign at the dam site, as well as at the entrance to the worksite from any primary, secondary, or rural roadway. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

6.7.2. Distance from road to sign

For signs along roadways, signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.7.3. Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to ground elevation, shall be 2.5 meters.

6.7.4. Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.8. Irrigation

6.8.1. Placement

Signs should be placed at the entrance to irrigation work sites from major approach roads. Wherever feasible, signs should be placed close to population centers to ensure maximum visibility. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision. Where irrigation and/or drainage canals are adjacent to rural roadways, signs should be placed every 20 kilometers along the roadway.

6.8.2. Distance from road to sign

For signs along roadways, signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.8.3. Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to ground elevation, shall be 2.5 meters.

6.8.4. Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.9. Power

6.9.1. Generation

Placement

Signs should be placed at the entrance to power generation work sites from major approach roads. Wherever feasible, signs should be placed close to population centers to ensure maximum visibility. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

Distance from road to sign

Signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to the elevation of the near edge of the road pavement, shall be 2.5 meters.

Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.9.2. Transmission

Placement

Where transmission lines run adjacent to a road, there shall be one sign placed every 20 kilometers, on each side of the roadway. Wherever feasible, signs should be placed close to population centers to ensure maximum visibility. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

Distance from road to sign

Signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to the elevation of the near edge of the road pavement, shall be 2.5 meters.

Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.9.3. Distribution**Placement**

For rehabilitation of electrical substations, there shall be a sign at the project site that is visible from the nearest major roadway. For electrical distribution lines, there shall be one sign placed every 20 kilometers of line, on each side of the roadway. Wherever feasible, signs should be placed close to population or market centers to ensure maximum visibility. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

Distance from road to sign

Signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point

where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to the elevation of the near edge of the road pavement, shall be 2.5 meters.

Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

6.10. Vertical structures

This section provides specifications for signs for vertical structures, e.g. schools, health clinics, courthouses, land administration buildings, etc.

6.10.1. Placement

Signs should be placed in close proximity to the structure under construction, in alignment with any nearby roadways to ensure that the sign is visible to vehicles and pedestrians. Sign placement shall not obstruct the visibility of regulatory, safety, and guide signs, or other applicable traffic control devices. Signs should be aligned with the road user's line of vision.

6.10.2. Distance from road to sign

Signs shall be placed at least 4 meters from the edge of the road pavement (or 2 meters from shoulder) unless prescribed otherwise by local law. All supports should be located as far as practical from the edge of the shoulder. Signs should be placed behind existing roadside barriers where possible.

Signs should be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. Where mirror reflection from the sign face is encountered to such a degree as to reduce legibility, the sign should be turned slightly away from the road. Signs that are placed 9 meters or more from the pavement edge should be turned toward the road. On curved alignments, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located. On grades, sign faces may be tilted forward or back from the vertical position to improve the viewing angle.

6.10.3. Sign height

The minimum sign height, unless prescribed otherwise by local law, measured vertically from the bottom of the sign to ground elevation, shall be 2.5 meters.

6.10.4. Sign size

Signs shall measure 304 cm. (width) by 166 cm. (height). Specifications for each component of the sign are given in Figure 1.

Endnotes

1. This document provides additional detail and guidance with respect to the section on “How to Mark Compact Projects – Projects with Works” in MCC’s Standards for Global Marking